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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,448	04/17/2001	Michael McClary	004906.P030	2389

7590 04/21/2004

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EXAMINER

STEVENS, ROBERTA A

ART UNIT PAPER NUMBER

2665

DATE MAILED: 04/21/2004

19

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/837,448

Applicant(s)

MCCLARY ET AL.

Examiner

Roberta A Stevens

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 49 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support in the specification for the packet processor to cause one or more of the lower level frames to be compressed at a remote location before generation of the network packets.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 21, 24-25, 33 and 36-37 are rejected under 35 U.S.C. 102(e) as being anticipated by the admitted prior art.

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5. Regarding claim 21, the admitted prior art teaches a method comprising: receiving a first TDM signal that includes overhead data a payload data; determining frame boundaries within the first TDM signal; placing the TDM signal into packet engine packets based o the frame boundaries within the TDM signal, wherein a payload of a packet engine packet stores one frame within the TDM signal; receiving a second TDM signal; placing the second TDM signal into second packet engine packet, independent of frame boundaries within the second TDM signal; and generating network packets from the first and second packet engine packets using a same packet processor

6. Regarding claims 24-25 and 36-37, the admitted prior art teaches (figure 2) DS-1 and DS-3.

7. Regarding claim 33, the admitted prior art teaches a machine-readable medium that provides instructions, which when executed by a machine, cause the machine to perform operations comprising: receiving a first TDM signal that includes overhead data a payload data; determining frame boundaries within the first TDM signal; placing the TDM signal into packet engine packets based o the frame boundaries within the TDM signal, wherein a payload of a packet engine packet stores one frame within the TDM signal; receiving a second TDM signal; placing the second TDM signal into second packet engine packet, independent of frame boundaries within the second TDM signal; and generating network packets from the first and second packet engine packets using a same packet processor

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Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-4, 5-11, 12-15, 16-20, 22-23, 26-32, 34-41, 42-44 and 45-48, rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Chao (U.S. 4893306).

10. Regarding claim 1, the admitted prior art teaches a line card in a network element comprising: a deframer unit to receive a TDM signal, the TDM signal including a payload and overhead data; a packet engine unit coupled to the deframer unit, the packet engine unit to receive the payload, the overhead data and to generate a number of packet engine packets, wherein a payload of a packet engine packet stores one frame within the TDM signal such that the packet engine packets include the payload; and a packet processor coupled to the packet engine unit, the packet processor to receive the packet engine packets and to generate network packets based on the packet engine packets.

11. The admitted prior art does not teach generating frame alignment data.

12. Chao teaches (column 4, lines 39-64) frame alignment data in a frame for a system in handling TDM and packet transmission. It would have been obvious to one of ordinary skill in this art to adapt to the admitted prior art Chao's concept of frame alignment data to maintain synchronization within the system.

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13. Regarding claim 2, Chao teaches (column 4, lines 39-64) the packets including payload, overhead and frame alignment data

14. Regarding claims 3-4, 6-7, 9-10, 12-15, 17-19, 28-30, 36-37, 42-43 and 45-46, the admitted prior art teaches (figure 2) DS-1, DS-3, DS0 and DS-0.

15. Regarding claims 5, 11, 26, 31, 38, 44 as for E1, E3 and J1, It would have been obvious to one of ordinary skill in this art to adapt to these admitted prior art and Chao as they are well known in the art.

16. Regarding claim 8, , the admitted prior art teaches a network element comprising: a number of line cards, including: a deframer unit to receive a TDM signal, the TDM signal including a payload and overhead data; a packet engine unit coupled to the deframer unit, the packet engine unit to receive the payload, the overhead data and to generate a number of packet engine packets, wherein a payload of a packet engine packet stores one frame within the TDM signal such that the packet engine packets include the payload; a packet processor coupled to the packet engine unit, the packet processor to receive the packet engine packets and to generate network packets based on the packet engine packets; and at least one control card coupled to the number of line cards.

17. The admitted prior art does not teach generating frame alignment data.

18. Chao teaches (column 4, lines 39-64) frame alignment data in a frame for a system in handling TDM and packet transmission. It would have been obvious to one of ordinary skill in

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this art to adapt to the admitted prior art Chao's concept of frame alignment data to maintain synchronization within the system.

19. Regarding claim 16, the admitted prior art teaches a method comprising: receiving a TDM signal that includes payload and overhead data; placing the TDM signal into packet engine packets based on the frame boundaries within the TDM signal, wherein the overhead data and the payload data are within packet engine packets such that each packet engine packet corresponds to a frame within the TDM signal; and encapsulating the packet engine packets into network packets.

20. The admitted prior art does not teach generating frame alignment data.

21. Chao teaches (column 4, lines 39-64) frame alignment data in a frame for a system in handling TDM and packet transmission. It would have been obvious to one of ordinary skill in this art to adapt to the admitted prior art Chao's concept of frame alignment data to maintain synchronization within the system.

22. Regarding claims 20 and 32, the admitted prior art teaches packets including Internet Protocol.

23. Regarding claim 27, the admitted prior art teaches a machine-readable medium that provides instructions, which when executed by a machine, cause the machine to perform operations comprising: receiving a TDM signal that includes payload and overhead data; placing the TDM signal into packet engine packets based on the frame boundaries within the TDM signal,

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wherein the overhead data and the payload data are within packet engine packets such that each packet engine packet corresponds to a frame within the TDM signal; and encapsulating the packet engine packets into network packets.

24. The admitted prior art does not teach generating frame alignment data.

25. Chao teaches (column 4, lines 39-64) frame alignment data in a frame for a system in handling TDM and packet transmission. It would have been obvious to one of ordinary skill in this art to adapt to the admitted prior art Chao's concept of frame alignment data to maintain synchronization within the system.

26. Regarding claims 22, 23, 34 and 35, as mentioned above, the admitted prior art teaches all of the limitations of claims 21 and 33.

27. The admitted prior art does not teach generating frame alignment data.

28. Chao teaches (column 4, lines 39-64) frame alignment data in a frame for a system in handling TDM and packet transmission. It would have been obvious to one of ordinary skill in this art to adapt to the admitted prior art Chao's concept of frame alignment data to maintain synchronization within the system.

29. Regarding claims 39 and 40, the admitted prior art teaches a superframe (DS1).

30. The admitted prior art does not teach frame alignment data.

31. Chao teaches (column 4, lines 39-64) frame alignment data in a frame for a system in handling TDM and packet transmission. It would have been obvious to one of ordinary skill in

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this art to adapt to the admitted prior art Chao's concept of frame alignment data to maintain synchronization within an environment involving transmission of more data using a superframe.

32. Regarding claim 41, the admitted prior art teaches a packet processor to receive network packets, wherein payloads of the network packets are to include portions of a number of packet engine packets and extract the payloads of the network packets; a packet engine unit coupled to the packet processor, to receive the payload to reconstruct the number of packet engine packets, wherein the packet engine packet corresponds to a frame of a TDM signal; a framer unit coupled to the packet engine unit, to receive the frames of the TDM signal, to reconstruct the superframe within the TDM signal.

33. The admitted prior art does not teach frame alignment data.

34. Chao teaches (column 4, lines 39-64) frame alignment data in a frame for a system in handling TDM and packet transmission. It would have been obvious to one of ordinary skill in this art to adapt to the admitted prior art Chao's concept of frame alignment data to maintain synchronization within an environment involving transmission of more data using a superframe.

35. Regarding claim 47, the admitted prior art teaches an apparatus comprising: a line card to be used in a network element, including, a deframer unit to deframer a frame that includes payload and overhead data that is either TDM data or packet based data; a packet engine unit coupled to the deframer unit, to generate a number of packet engine packets that include the payload and the overhead data from the frame when the payload is TDM data and to locate packet boundaries within the payload of the frame when the payload is packet based; and a

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packet processor coupled to the packet engine unit, to deframe the TDM data into lower level frames and add a header to each to generate network packets when the payload is TDM and to generate network packets based payload and the located packet boundaries when the payload is packet based.

36. The admitted prior art does not teach generating frame alignment data.

37. Chao teaches (column 4, lines 39-64) frame alignment data in a frame for a system in handling TDM and packet transmission. It would have been obvious to one of ordinary skill in this art to adapt to the admitted prior art Chao's concept of frame alignment data to maintain synchronization within the system.

38. Regarding claim 48, the admitted prior art teaches the packet processor to compress one or more of the lower level frames.

Conclusion

39. Any inquiry concerning the communication or earlier communications from the examiner should be directed to Roberta Stevens whose telephone number is (703) 308-6607. The examiner can normally be reached on Monday through Friday from 9:00 am to 5:30 p.m.

40. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor can be reached on (703) 308-6602.

41. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-4700.

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42. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 872-9306


For informal draft communications, please label "PROPOSED" or "DRAFT"

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA. Sixth Floor (Receptionist).

Roberta A. Stevens

Patent Examiner

04-18-04



STEVEN H. D NGUYEN
PRIMARY EXAMINER